Fig. 1 PRIOR ART

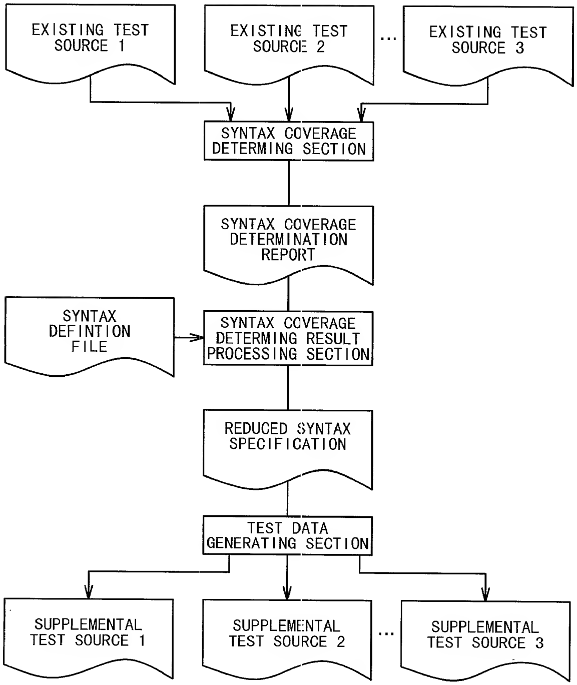

EXISTING TEST SOURCE 1
EXISTING TEST SOURCE 2
...
EXISTING TEST SOURCE 3
SYNTAX COVERAGE DETERMING SECTION
SYNTAX COVERAGE DETERMINATION REPORT
SYNTAX DEFINTION FILE
SYNTAX COVERAGE DETERMING RESULT PROCESSING SECTION
REDUCED SYNTAX SPECIFICATION
TEST DATA GENERATING SECTION
SUPPLEMENTAL TEST SOURCE 1
SUPPLEMENTAL TEST SOURCE 2
...
SUPPLEMENTAL TEST SOURCE 3

Fig. 2 PRIOR ART

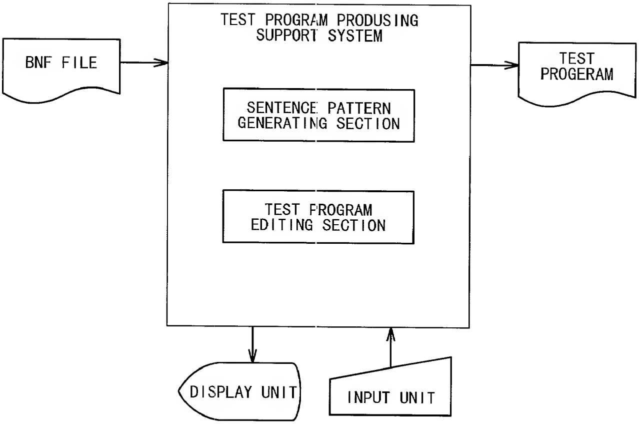

BNF FILE
TEST PROGRAM PRODUSING SUPPORT SYSTEM
SENTENCE PATTERN GENERATING SECTION
TEST PROGRAM EDITING SECTION
TEST PROGERAM
DISPLAY UNIT
INPUT UNIT

Fig. 3 PRIOR ART

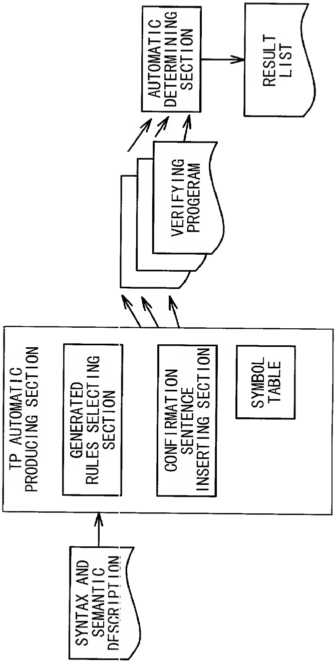

SYNTAX AND SEMANTIC DESCRIPTION
TP AUTOMATIC PRODUCING SECTION
GENERATED RULES SELECTING SECTION
CONFIRMATION SENTENCE INSERTING SECTION
SYMBOL TABLE
VERIFYING PROGERAM
AUTOMATIC DETERMINING SECTION
RESULT LIST

Fig. 4

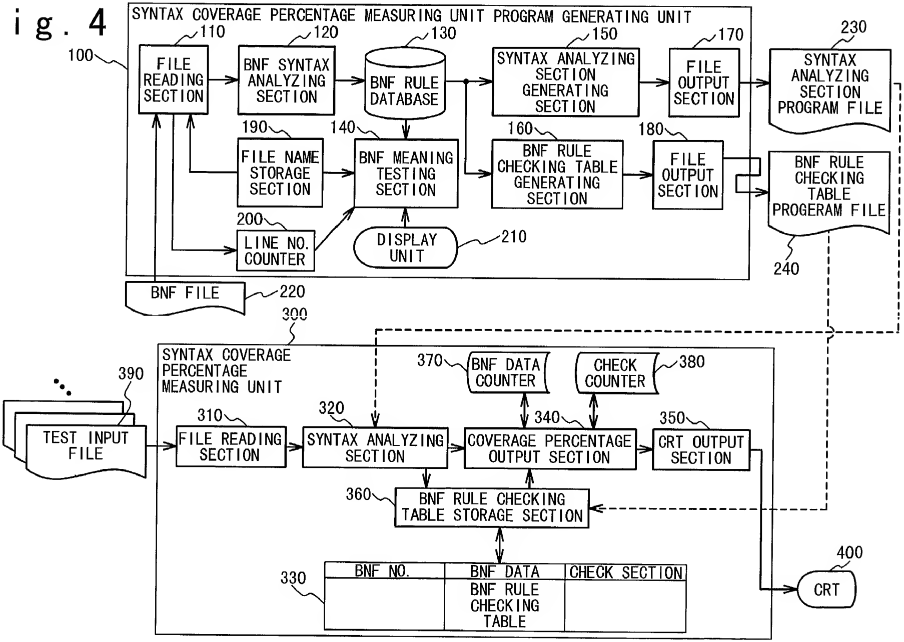

SYNTAX COVERAGE PERCENTAGE MEASURING UNIT PROGRAM GENERATING UNIT
100
110
FILE READING SECTION
120
BNF SYNTAX ANALYZING SECTION
130
BNF RULE DATABASE
150
SYNTAX ANALYZING SECTION GENERATING SECTION
170
FILE OUTPUT SECTION
230
SYNTAX ANALYZING SECTION PROGRAM FILE
190
FILE NAME STORAGE SECTION
140
BNF MEANING TESTING SECTION
160
BNF RULE CHECKING TABLE GENERATING SECTION
180
FILE OUTPUT SECTION
BNF RULE CHECKING TABLE PROGERAM FILE
240
200
LINE NO. COUNTER
DISPLAY UNIT
210
BNF FILE
220
300
SYNTAX COVERAGE PERCENTAGE MEASURING UNIT
390
TEST INPUT FILE
310
FILE READING SECTION
320
SYNTAX ANALYZING SECTION
370
BNF DATA COUNTER
CHECK COUNTER
380
340
COVERAGE PERCENTAGE OUTPUT SECTION
350
CRT OUTPUT SECTION
360
BNF RULE CHECKING TABLE STORAGE SECTION
330
BNF NO.
BNF DATA
CHECK SECTION
BNF RULE CHECKING TABLE
400
CRT

Fig. 5

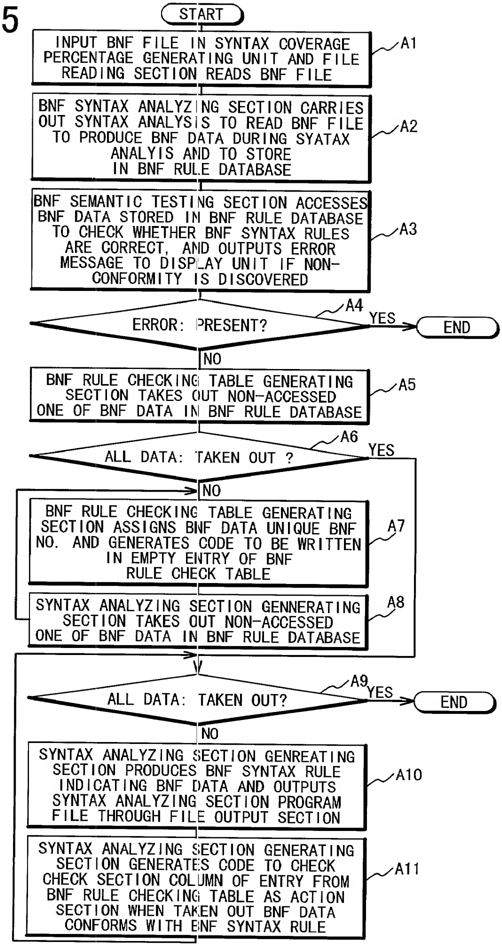

START
INPUT BNF FILE IN SYNTAX COVERAGE PERCENTAGE GENERATING UNIT AND FILE READING SECTION READS BNF FILE
A1
BNF SYNTAX ANALYZING SECTION CARRIES OUT SYNTAX ANALYSIS TO READ BNF FILE TO PRODUCE BNF DATA DURING SYATAX ANALYIS AND TO STORE IN BNF RULE DATABASE
A2
BNF SEMANTIC TESTING SECTION ACCESSES BNF DATA STORED IN BNF RULE DATABASE TO CHECK WHETHER BNF SYNTAX RULES ARE CORRECT, AND OUTPUTS ERROR MESSAGE TO DISPLAY UNIT IF NON-CONFORMITY IS DISCOVERED
A3
A4
ERROR: PRESENT?
YES
END
NO
BNF RULE CHECKING TABLE GENERATING SECTION TAKES OUT NON-ACCESSED ONE OF BNF DATA IN BNF RULE DATABASE
A5
A6
ALL DATA: TAKEN OUT ?
YES
NO
BNF RULE CHECKING TABLE GENERATING SECTION ASSIGNS BNF DATA UNIQUE BNF NO. AND GENERATES CODE TO BE WRITTEN IN EMPTY ENTRY OF BNF RULE CHECK TABLE
A7
SYNTAX ANALYZING SECTION GENNERATING SECTION TAKES OUT NON-ACCESSED ONE OF BNF DATA IN BNF RULE DATABASE
A8
A9
ALL DATA: TAKEN OUT?
YES
END
NO
SYNTAX ANALYZING SECTION GENREATING SECTION PRODUCES BNF SYNTAX RULE INDICATING BNF DATA AND OUTPUTS SYNTAX ANALYZING SECTION PROGRAM FILE THROUGH FILE OUTPUT SECTION
A10
SYNTAX ANALYZING SECTION GENERATING SECTION GENERATES CODE TO CHECK CHECK SECTION COLUMN OF ENTRY FROM BNF RULE CHECKING TABLE AS ACTION SECTION WHEN TAKEN OUT BNF DATA CONFORMS WITH BNF SYNTAX RULE
A11

Fig. 6

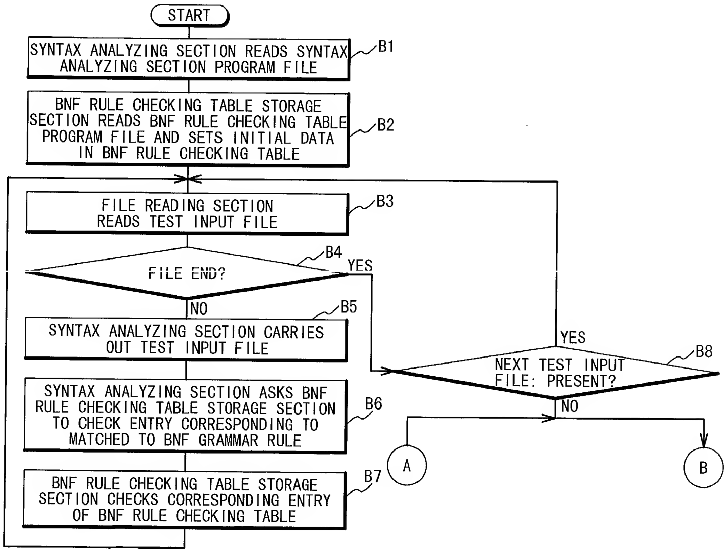

START
SYNTAX ANALYZING SECTION READS SYNTAX ANALYZING SECTION PROGRAM FILE
B1
BNF RULE CHECKING TABLE STORAGE SECTION READS BNF RULE CHECKING TABLE PROGRAM FILE AND SETS INITIAL DATA IN BNF RULE CHECKING TABLE
B2
FILE READING SECTION READS TEST INPUT FILE
B3
FILE END?
B4
YES
NO
SYNTAX ANALYZING SECTION CARRIES OUT TEST INPUT FILE
B5
SYNTAX ANALYZING SECTION ASKS BNF RULE CHECKING TABLE STORAGE SECTION TO CHECK ENTRY CORRESPONDING TO MATCHED TO BNF GRAMMAR RULE
B6
BNF RULE CHECKING TABLE STORAGE SECTION CHECKS CORRESPONDING ENTRY OF BNF RULE CHECKING TABLE
B7
NEXT TEST INPUT FILE: PRESENT?
B8
YES
NO
A
B

Fig. 7

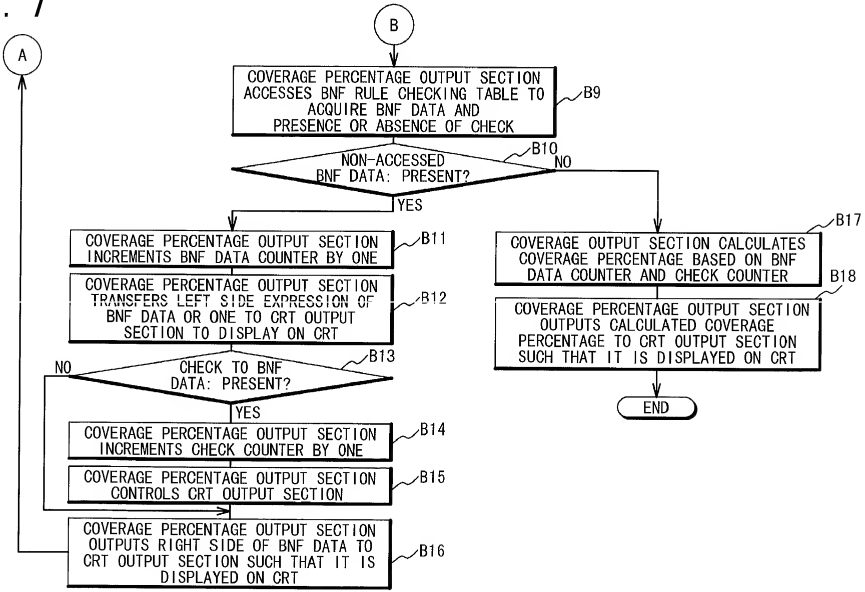
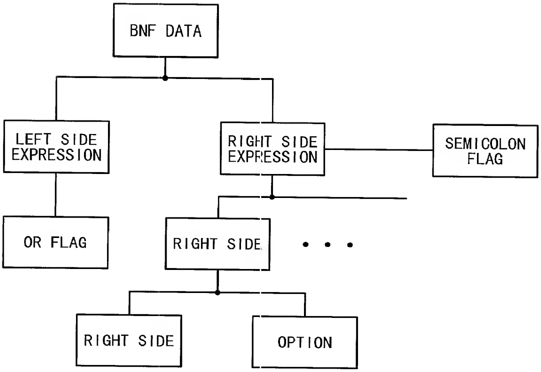

B
A
COVERAGE PERCENTAGE OUTPUT SECTION ACCESSES BNF RULE CHECKING TABLE TO ACQUIRE BNF DATA AND PRESENCE OR ABSENCE OF CHECK
B9
NON-ACCESSED BNF DATA: PRESENT?
B10
NO
YES
COVERAGE PERCENTAGE OUTPUT SECTION INCREMENTS BNF DATA COUNTER BY ONE
B11
COVERAGE PERCENTAGE OUTPUT SECTION TRANSFERS LEFT SIDE EXPRESSION OF BNF DATA OR ONE TO CRT OUTPUT SECTION TO DISPLAY ON CRT
B12
CHECK TO BNF DATA: PRESENT?
B13
NO
YES
COVERAGE PERCENTAGE OUTPUT SECTION INCREMENTS CHECK COUNTER BY ONE
B14
COVERAGE PERCENTAGE OUTPUT SECTION CONTROLS CRT OUTPUT SECTION
B15
COVERAGE PERCENTAGE OUTPUT SECTION OUTPUTS RIGHT SIDE OF BNF DATA TO CRT OUTPUT SECTION SUCH THAT IT IS DISPLAYED ON CRT
B16
COVERAGE OUTPUT SECTION CALCULATES COVERAGE PERCENTAGE BASED ON BNF DATA COUNTER AND CHECK COUNTER
B17
COVERAGE PERCENTAGE OUTPUT SECTION OUTPUTS CALCULATED COVERAGE PERCENTAGE TO CRT OUTPUT SECTION SUCH THAT IT IS DISPLAYED ON CRT
B18
END

Fig. 8


BNF DATA
LEFT SIDE EXPRESSION
RIGHT SIDE EXPRESSION
SEMICOLON FLAG
OR FLAG
RIGHT SIDE
• • •
RIGHT SIDE
OPTION

F i g . 9

```
(OMITTED)
/***** BNF GRAMMER RULE GROUP *****/
packages ::=package1:e1 packages:e2
         |
         ;
package1 ::=PACKAGE packageName:e1 BEGIN
               attributeBody: e2
               actionBody: e3
               notificationBody:e4
            END
          ;
acttributeBody ::=ATTRIBUTES BEGIN
                       attributes:e
                       END
               |
               ;
acttributes ::=attribute:e1 SEMICOLON attributes:e2
            |
            ;
acttribute ::=attributeName:e1 type:e2 support:e3
           ;
```

09987810 .062201

Fig. 10

```
(OMITTED)
type ::=NORMAL
      |  SHARED
      |  NEATTER neAttr:e
      ;

neAttr ::=BEGIN neInfs:e END
       ;
neInfis ::=packageptr SEMICOLON
           segment:e1 SEMICOLON
           offset:e3 SEMICOLON
           encodefunc:e4 SEMICOLON
           encodefunc:e5 SEMICOLON
        ;
```

Fig. 11

```
(OMTTED)
segment ::=SEGMENT segNo:e ;
offset ::=OFFSET address:e ;
size ::=DATASIZE length:e   ;
encodeFunc ::=ENCODE funcName:e ;
decodeFunc ::=DECODE funcName:e ;
segNO ::=integer:e  ;
length ::=address:e  ;
       |  OPENPR integer:e CLOSER  ;
       ;
addess ::=integer:e1 bit:e2  ;
bit ::=OPENPR integer:e2 CLOSER
    |
    ;
```

09887818 .062201

Fig. 12

```
packages ::=
* package1 packages
  |   *
  ;
package1 ::=
* PACKAGE   packageName BEGIN attributeBody
  actionBody notificationBody  END
  ;
attributeBody  ::=
* ATTRIBUTES  BIGIN  attributes  END
  |
  ;
attributes ::=
* attribute SEMICOLON attributes
  |   *
  ;
attribute ::=
* attributName  type suppout
  ;
```

Fig. 13

```
(OMITTED)
type ::=
* NORMAL
   | SHARED
   | * NEATTR neAttr
   ;
neAttr ::=
* BEGIN neInfos  END
   ;
neInfos ::=
* packageptr SEMICOLON segment SEMICOLON size
  SEMICOLON offset SEMICOLON encodeFunc  SEMICOLON
  decodeFunc SEMICOLON
  ;
```

Fig. 14

```
(OMTITTED)

segemnt ::=
* SEGMENT  seNo
  ;
offset ::=
* OFFSET  address
  ;
size  ::=
* DATASIZE  length
  ;
encodeFunc ::=
* ENCODE  funcName
  ;
decodeFunc ::=
* DECODE funcName
  ;
segNo ::=
* integer
  ;
length ::=
* address
  | OPENPR  integer   CLOSEPR
  ;
addess ::=
* integer  bit
  ;
bit ::=
* OPENPR  integer  CLOSEPR
  |
  ;
coverage =34%
```

00587040.060204

Fig. 15

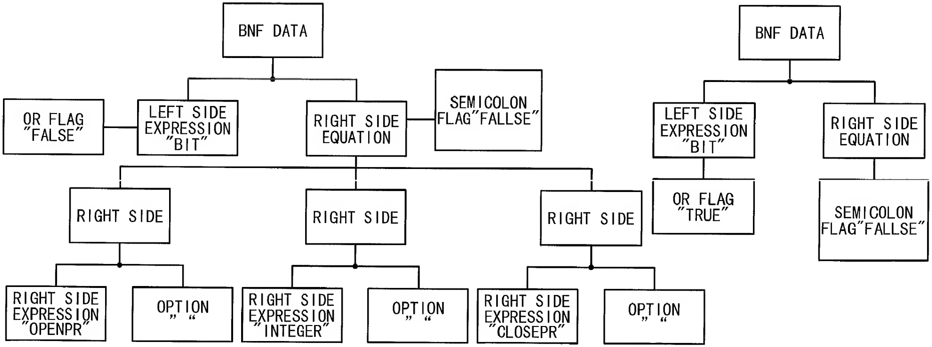

BNF DATA
OR FLAG "FALSE"
LEFT SIDE EXPRESSION "BIT"
RIGHT SIDE EQUATION
SEMICOLON FLAG"FALLSE"
RIGHT SIDE
RIGHT SIDE
RIGHT SIDE
RIGHT SIDE EXPRESSION "OPENPR"
OPTION " "
RIGHT SIDE EXPRESSION "INTEGER"
OPTION " "
RIGHT SIDE EXPRESSION "CLOSEPR"
OPTION " "
BNF DATA
LEFT SIDE EXPRESSION "BIT"
RIGHT SIDE EQUATION
OR FLAG "TRUE"
SEMICOLON FLAG"FALLSE"

Fig. 16

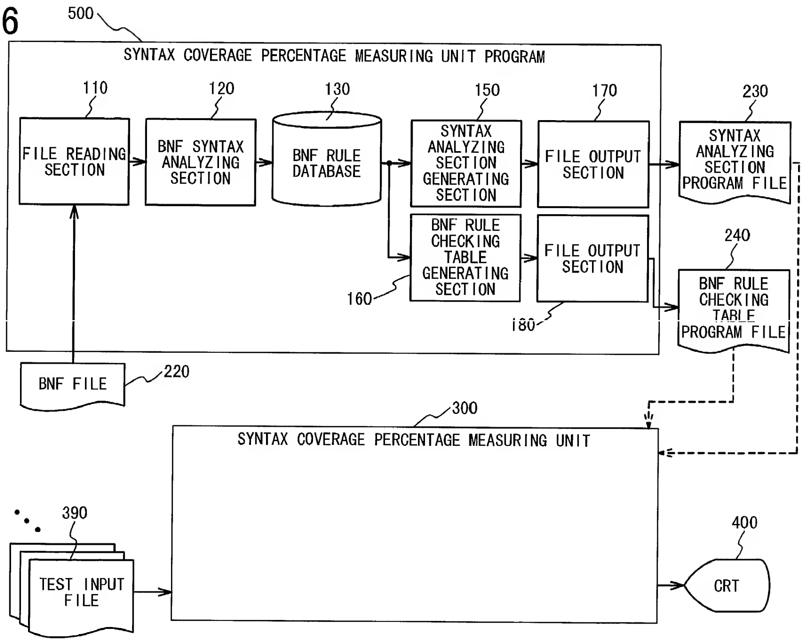

500
SYNTAX COVERAGE PERCENTAGE MEASURING UNIT PROGRAM
110
FILE READING SECTION
120
BNF SYNTAX ANALYZING SECTION
130
BNF RULE DATABASE
150
SYNTAX ANALYZING SECTION GENERATING SECTION
170
FILE OUTPUT SECTION
230
SYNTAX ANALYZING SECTION PROGRAM FILE
160
BNF RULE CHECKING TABLE GENERATING SECTION
FILE OUTPUT SECTION
180
240
BNF RULE CHECKING TABLE PROGRAM FILE
BNF FILE
220
300
SYNTAX COVERAGE PERCENTAGE MEASURING UNIT
390
TEST INPUT FILE
400
CRT

Fig. 17

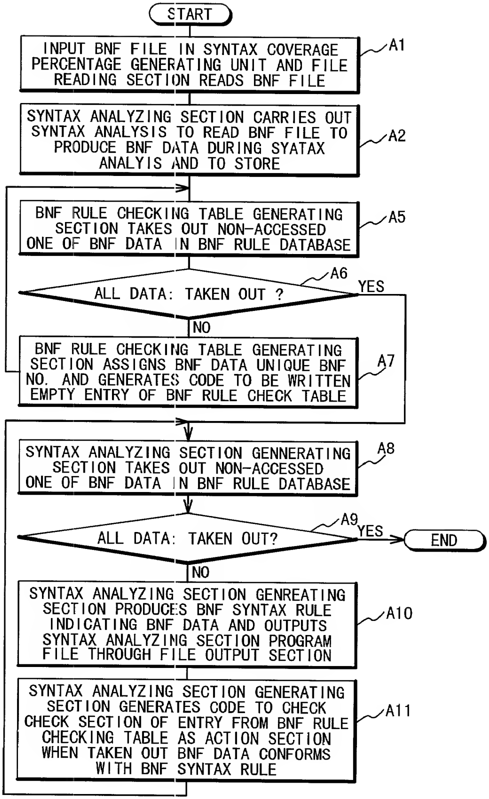

START
INPUT BNF FILE IN SYNTAX COVERAGE PERCENTAGE GENERATING UNIT AND FILE READING SECTION READS BNF FILE
A1
SYNTAX ANALYZING SECTION CARRIES OUT SYNTAX ANALYSIS TO READ BNF FILE TO PRODUCE BNF DATA DURING SYATAX ANALYIS AND TO STORE
A2
BNF RULE CHECKING TABLE GENERATING SECTION TAKES OUT NON-ACCESSED ONE OF BNF DATA IN BNF RULE DATABASE
A5
ALL DATA: TAKEN OUT ?
A6
YES
NO
BNF RULE CHECKING TABLE GENERATING SECTION ASSIGNS BNF DATA UNIQUE BNF NO. AND GENERATES CODE TO BE WRITTEN EMPTY ENTRY OF BNF RULE CHECK TABLE
A7
SYNTAX ANALYZING SECTION GENNERATING SECTION TAKES OUT NON-ACCESSED ONE OF BNF DATA IN BNF RULE DATABASE
A8
ALL DATA: TAKEN OUT?
A9
YES
END
NO
SYNTAX ANALYZING SECTION GENREATING SECTION PRODUCES BNF SYNTAX RULE INDICATING BNF DATA AND OUTPUTS SYNTAX ANALYZING SECTION PROGRAM FILE THROUGH FILE OUTPUT SECTION
A10
SYNTAX ANALYZING SECTION GENERATING SECTION GENERATES CODE TO CHECK CHECK SECTION OF ENTRY FROM BNF RULE CHECKING TABLE AS ACTION SECTION WHEN TAKEN OUT BNF DATA CONFORMS WITH BNF SYNTAX RULE
A11

Fig. 18

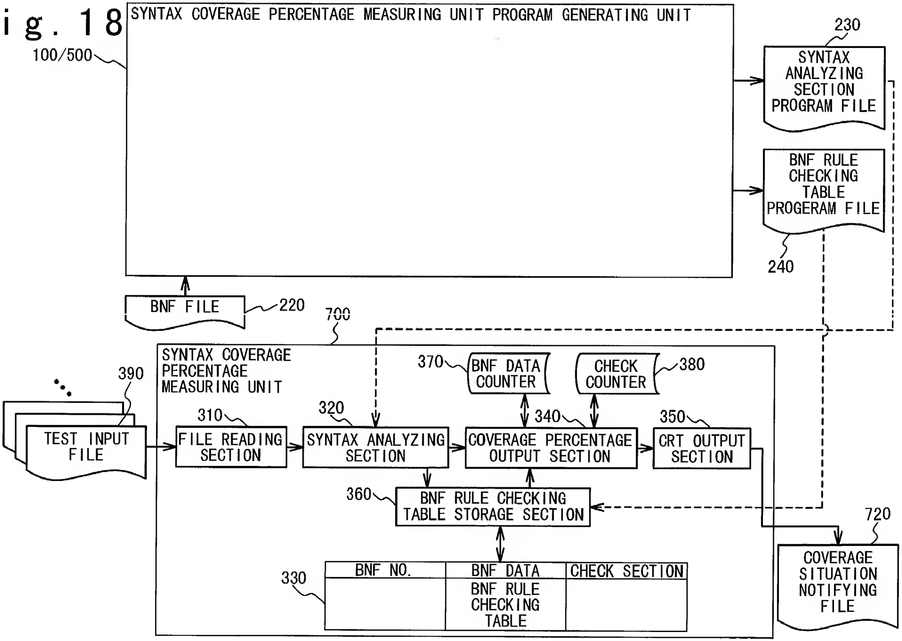

SYNTAX COVERAGE PERCENTAGE MEASURING UNIT PROGRAM GENERATING UNIT
100/500
230
SYNTAX ANALYZING SECTION PROGRAM FILE
BNF RULE CHECKING TABLE PROGERAM FILE
240
BNF FILE
220
700
SYNTAX COVERAGE PERCENTAGE MEASURING UNIT
390
TEST INPUT FILE
310
FILE READING SECTION
320
SYNTAX ANALYZING SECTION
370
BNF DATA COUNTER
CHECK COUNTER
380
340
COVERAGE PERCENTAGE OUTPUT SECTION
350
CRT OUTPUT SECTION
360
BNF RULE CHECKING TABLE STORAGE SECTION
330
BNF NO.
BNF DATA
CHECK SECTION
BNF RULE CHECKING TABLE
720
COVERAGE SITUATION NOTIFYING FILE

Fig. 19

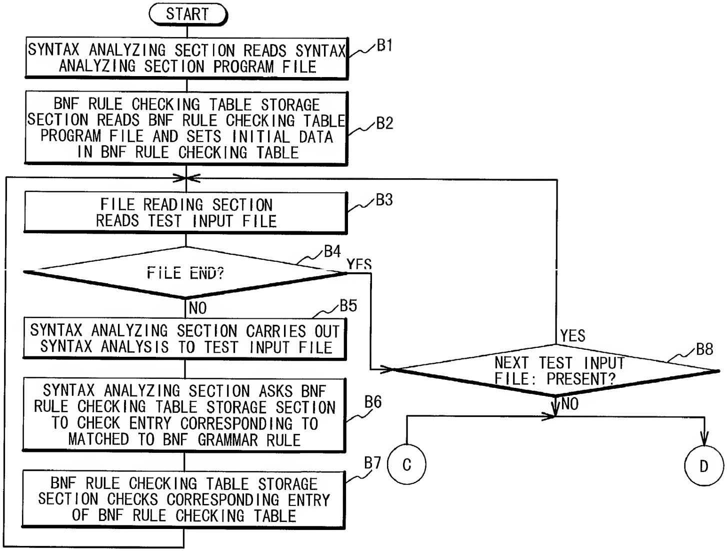

START
SYNTAX ANALYZING SECTION READS SYNTAX ANALYZING SECTION PROGRAM FILE
B1
BNF RULE CHECKING TABLE STORAGE SECTION READS BNF RULE CHECKING TABLE PROGRAM FILE AND SETS INITIAL DATA IN BNF RULE CHECKING TABLE
B2
FILE READING SECTION READS TEST INPUT FILE
B3
FILE END?
B4
YES
NO
SYNTAX ANALYZING SECTION CARRIES OUT SYNTAX ANALYSIS TO TEST INPUT FILE
B5
SYNTAX ANALYZING SECTION ASKS BNF RULE CHECKING TABLE STORAGE SECTION TO CHECK ENTRY CORRESPONDING TO MATCHED TO BNF GRAMMAR RULE
B6
BNF RULE CHECKING TABLE STORAGE SECTION CHECKS CORRESPONDING ENTRY OF BNF RULE CHECKING TABLE
B7
YES
NEXT TEST INPUT FILE: PRESENT?
B8
NO
C
D

Fig. 20

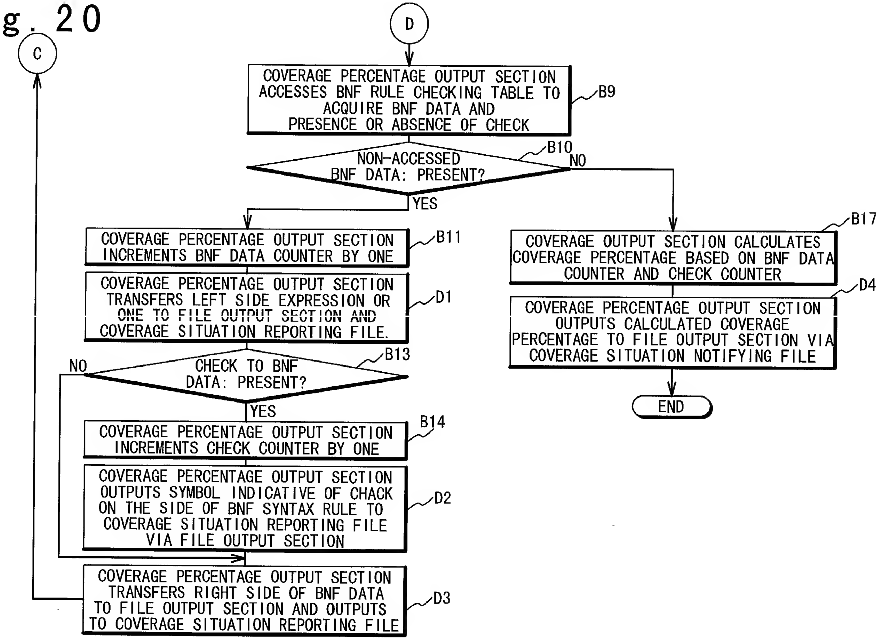
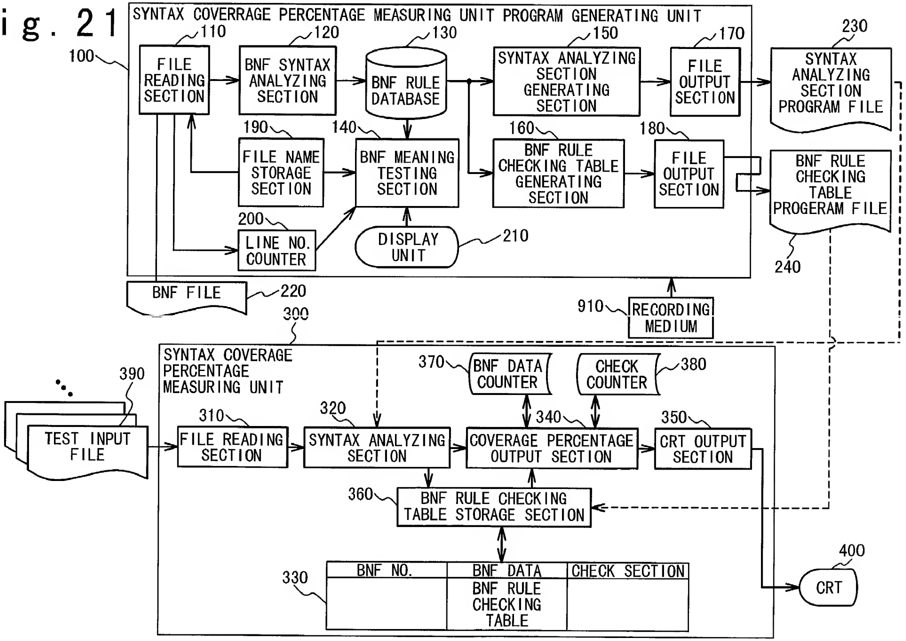

D
COVERAGE PERCENTAGE OUTPUT SECTION ACCESSES BNF RULE CHECKING TABLE TO ACQUIRE BNF DATA AND PRESENCE OR ABSENCE OF CHECK
B9
NON-ACCESSED BNF DATA: PRESENT?
B10
NO
YES
COVERAGE PERCENTAGE OUTPUT SECTION INCREMENTS BNF DATA COUNTER BY ONE
B11
COVERAGE PERCENTAGE OUTPUT SECTION TRANSFERS LEFT SIDE EXPRESSION OR ONE TO FILE OUTPUT SECTION AND COVERAGE SITUATION REPORTING FILE.
D1
CHECK TO BNF DATA: PRESENT?
B13
NO
YES
COVERAGE PERCENTAGE OUTPUT SECTION INCREMENTS CHECK COUNTER BY ONE
B14
COVERAGE PERCENTAGE OUTPUT SECTION OUTPUTS SYMBOL INDICATIVE OF CHACK ON THE SIDE OF BNF SYNTAX RULE TO COVERAGE SITUATION REPORTING FILE VIA FILE OUTPUT SECTION
D2
COVERAGE PERCENTAGE OUTPUT SECTION TRANSFERS RIGHT SIDE OF BNF DATA TO FILE OUTPUT SECTION AND OUTPUTS TO COVERAGE SITUATION REPORTING FILE
D3
C
COVERAGE OUTPUT SECTION CALCULATES COVERAGE PERCENTAGE BASED ON BNF DATA COUNTER AND CHECK COUNTER
B17
COVERAGE PERCENTAGE OUTPUT SECTION OUTPUTS CALCULATED COVERAGE PERCENTAGE TO FILE OUTPUT SECTION VIA COVERAGE SITUATION NOTIFYING FILE
D4
END

Fig. 21



SYNTAX COVERRAGE PERCENTAGE MEASURING UNIT PROGRAM GENERATING UNIT
100
110
FILE READING SECTION
120
BNF SYNTAX ANALYZING SECTION
130
BNF RULE DATABASE
150
SYNTAX ANALYZING SECTION GENERATING SECTION
170
FILE OUTPUT SECTION
230
SYNTAX ANALYZING SECTION PROGRAM FILE
190
FILE NAME STORAGE SECTION
140
BNF MEANING TESTING SECTION
160
BNF RULE CHECKING TABLE GENERATING SECTION
180
FILE OUTPUT SECTION
BNF RULE CHECKING TABLE PROGERAM FILE
240
200
LINE NO. COUNTER
DISPLAY UNIT
210
BNF FILE
220
300
910
RECORDING MEDIUM
SYNTAX COVERAGE PERCENTAGE MEASURING UNIT
390
TEST INPUT FILE
370
BNF DATA COUNTER
CHECK COUNTER
380
310
FILE READING SECTION
320
SYNTAX ANALYZING SECTION
340
COVERAGE PERCENTAGE OUTPUT SECTION
350
CRT OUTPUT SECTION
360
BNF RULE CHECKING TABLE STORAGE SECTION
330
BNF NO.
BNF DATA
CHECK SECTION
BNF RULE CHECKING TABLE
400
CRT

Fig. 22

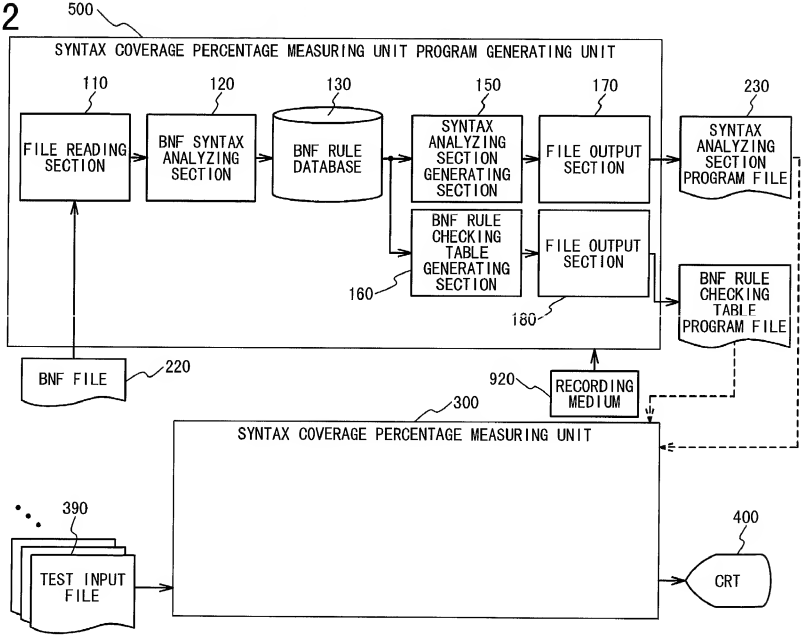
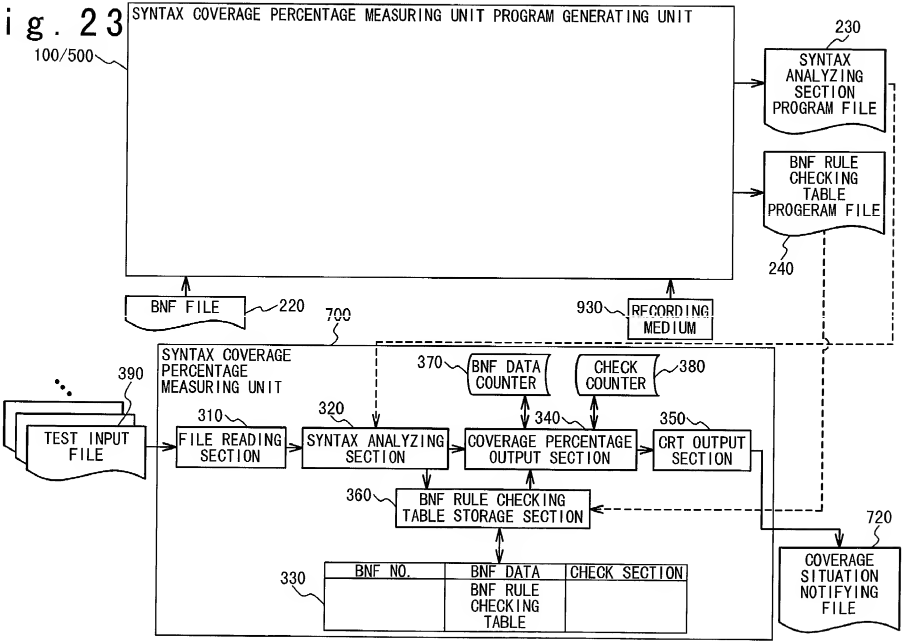

500
SYNTAX COVERAGE PERCENTAGE MEASURING UNIT PROGRAM GENERATING UNIT
110
FILE READING SECTION
120
BNF SYNTAX ANALYZING SECTION
130
BNF RULE DATABASE
150
SYNTAX ANALYZING SECTION GENERATING SECTION
170
FILE OUTPUT SECTION
230
SYNTAX ANALYZING SECTION PROGRAM FILE
BNF RULE CHECKING TABLE GENERATING SECTION
160
FILE OUTPUT SECTION
180
BNF RULE CHECKING TABLE PROGRAM FILE
BNF FILE
220
920
RECORDING MEDIUM
300
SYNTAX COVERAGE PERCENTAGE MEASURING UNIT
390
TEST INPUT FILE
400
CRT

Fig. 23


SYNTAX COVERAGE PERCENTAGE MEASURING UNIT PROGRAM GENERATING UNIT
100/500
230
SYNTAX ANALYZING SECTION PROGRAM FILE
BNF RULE CHECKING TABLE PROGERAM FILE
240
BNF FILE
220
700
930
RECORDING MEDIUM
SYNTAX COVERAGE PERCENTAGE MEASURING UNIT
390
TEST INPUT FILE
310
FILE READING SECTION
320
SYNTAX ANALYZING SECTION
370
BNF DATA COUNTER
CHECK COUNTER
380
340
COVERAGE PERCENTAGE OUTPUT SECTION
350
CRT OUTPUT SECTION
360
BNF RULE CHECKING TABLE STORAGE SECTION
720
COVERAGE SITUATION NOTIFYING FILE
330
BNF NO.
BNF DATA
CHECK SECTION
BNF RULE CHECKING TABLE